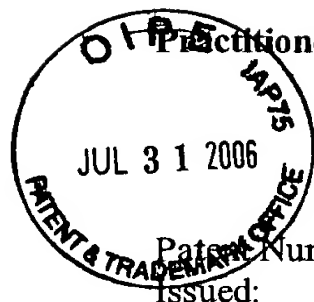


09/445139

CofC



Applicant's Docket No. U 012452-9

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Number: 6,988,201 B1
Issued: January 17, 2006
Name of Patentee: Changsheng XU, et al.
Title of Invention: METHOD AND APPARATUS FOR WATERMARKING WAVETABLE SYNTHESIS ARCHITECTURES

Certificate of Correction Branch
Director of the United States Patent and Trademark Office
P. O. Box 1450
Alexandria, VA 22313-1450

Certificate
AUG 03 2006
of Correction

ATTENTION: Certificate of Correction Branch
of the Office of Patent Publication

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT
FOR PTO MISTAKE (37 C.F.R. §1.322(a))

NOTE: "If such a request for correction was incurred through the fault of the United States Patent and Trademark Office (Office), and is clearly disclosed in the records of the Office, and is accompanied by documentation that unequivocally supports the patentee's assertion(s), a Certificate of Correction will be expeditiously issued. Such supporting documentation can consist of relevant photocopied receipts, manuscript pages, correspondence dated and received by the Office, photocopies of Examiners' responses regarding entry of amendments, or any other validation that supports the patentee's request so that the request can be processed without the patent file." Notice of September 17, 2002, 1262 OG 96.

1. Attached is Form PTO-1050 (PTO/SB/44) suitable for printing.

NOTE: Form PTO-1050 (or PTO/SB/44), using the column and line number in the printed patent, should be used exclusively regardless of the length or complexity of the subject matter. M.P.E.P. § 1485, 7th ed.

NOTE: The patent grant should be retained by the patentee. The PTO does not attach the Certificate of Correction to the patentee's copy of the patent. The patent grant will be returned to the patentee if submitted. M.P.E.P. § 1485, 8th ed.

2. The exact page and line number where the errors are shown correctly in the application file are:

NOTE: The exact page and line number where the errors occur in the application file should be identified on the request. However, on form PTO/SB/44, only the column and line number in the printed patent should be used. M.P.E.P. § 1480, 8th Edition.

Declaration filed December 2, 1999, Request for Corrected Filing Receipt of November 22, 2000, and title page of PCT/SG99/00004 (copies attached).

Date: July 26, 2006

AUG 3 2006

3. Please send the Certificate to:

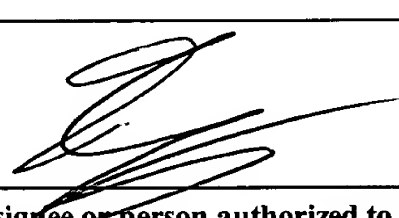
Name: William R. Evans

Address: c/o Ladas & Parry LLP
26 West 61st Street
New York, NY 10023

(complete, if applicable)

Signature(s) of patentee(s)

or



Signature of assignee or person authorized to sign
on behalf of assignee

KENT RIDGE DIGITAL LABS
(type or print name of assignee)

☒ Assignment recorded on
December 2, 1999

Reel 01057
Frame 0797

William R. Evans, 25858, (212) 708-1930
(type or print name of authorized person signing)

attorney of record who acts on behalf of assignee
Title of authorized person signing

☐ Recordal of assignment attached

☐ Attached is a "STATEMENT UNDER 37 CFR 3.73(b)," establishing the right of the
assignee to take action in this case.

NOTE: "A certificate of correction, under 35 U.S.C. 254, may be issued at the request of the patentee or [the patentee's] assignee." 37 C.F.R. § 1.322(a). The certificate of correction can be signed by the attorney of record who acts on behalf of the inventor(s) or assignee(s).

AUG 3 2006

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(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,988,201 B1
DATED : January 17, 2006
INVENTOR(S): Changsheng XU, et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On title page, item 22, "Feb. 12" should read -- Jan. 28 --.

MAILING ADDRESS OF SENDER:

William R. Evans
c/o Ladas & Parry LLP
26 West 61st Street
New York, N.Y. 10023
Reg. No. 25858
Tel. No. (212) 708-1930

PATENT NO. 6,988,201 B1

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APR 3 2006

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PTO/SB/01 (12-97)

Approved for use through 9/30/00. OMB 0651-0032

Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**DECLARATION FOR UTILITY OR
DESIGN****PATENT APPLICATION****(37 CFR 1.63)**☒ Declaration
Submitted
with Initial
Filing

OR

☐ Declaration
Submitted after Initial
Filing (surcharge
(37 CFR 1.16 (e))
required)**Attorney Docket Number****First Named Inventor**XU, Changsheng**COMPLETE IF KNOWN****Application Number**

/

Filing Date**Group Art Unit****Examiner Name**

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**Method And Apparatus For Watermarking Wavetable Synthesis
Architectures**

the specification of which

(Title of the Invention)

☐ is attached hereto

OR

☒ was filed on (MM/DD/YYYY) 01/28/1999

as United States Application Number or PCT International

Application Number PCT/SG99/00004 and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below.

Application Number(s)**Filing Date (MM/DD/YYYY)**☐ Additional provisional application
numbers are listed on a
supplemental priority data sheet
PTO/SB/02B attached hereto.

AUG 3 2000

[Page 1 of 2]

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Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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DECLARATION — Utility or Design Patent Application

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)
PCT/SG99/00004	01/28/1999	

☐ Additional U.S. or PCT international application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

As a named inventor, I hereby appoint the following registered practitioner(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

☐ Customer Number

OR

☐ Registered practitioner(s) name/registration number listed below

Place Customer
Number Bar Code
Label here

Name	Registration Number	Name	Registration Number

☐ Additional registered practitioner(s) named on supplemental Registered Practitioner Information sheet PTO/SB/02C attached hereto.

Direct all correspondence to: ☐ Customer Number or Bar Code Label ☐ OR ☐ Correspondence address below

Name					
Address					
Address					
City		State		ZIP	
Country		Telephone		Fax	

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of Sole or First Inventor: ☐ A petition has been filed for this unsigned inventor

Given Name (first and middle [if any])		Family Name or Surname	
Changsheng		Xu	
Inventor's Signature	Date		
	06/04/99		
Residence: City	State	Country	Citizenship
Singapore		Singapore	Chinese
Post Office Address	Blk 702, West Coast Road, #13-345 #06-337		
Post Office Address	Republic of Singapore		
City	State	ZIP	Country
Singapore		120702	Singapore

☒ Additional inventors are being named on the 1 supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto



U 012451-9

Please type a plus sign (+) in the box →

+

PTO/SB/02A (3-97)
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DECLARATION

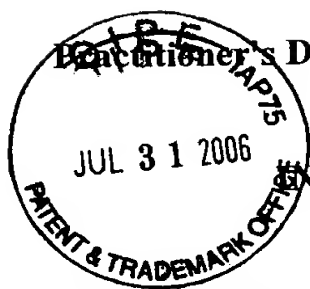
ADDITIONAL INVENTOR(S)
Supplemental Sheet
Page 1 of 1

Name of Additional Joint Inventor, if any:				<input type="checkbox"/> A petition has been filed for this unsigned inventor			
Given Name (first and middle [if any])				Family Name or Surname			
Jiankang				Wu			
Inventor's Signature				Date	6/4/99		
Residence: City	Singapore	State		Country	Singapore	Citizenship	Chinese
Post Office Address	Blk 51, Teban Gardens Road, #06-565						
Post Office Address	Republic of Singapore						
City	Singapore	State		ZIP	600051	Country	Singapore
Name of Additional Joint Inventor, if any:				<input type="checkbox"/> A petition has been filed for this unsigned inventor			
Given Name (first and middle [if any])				Family Name or Surname			
Qibin				Sun			
Inventor's Signature				Date	11/3/04		
Residence: City	Singapore	State		Country	Singapore	Citizenship	Chinese
Post Office Address	Blk 407, Clementi Avenue 1, #11-54						
Post Office Address	Republic of Singapore						
City	Singapore	State		ZIP	120407	Country	Singapore
Name of Additional Joint Inventor, if any:				<input type="checkbox"/> A petition has been filed for this unsigned inventor			
Given Name (first and middle [if any])				Family Name or Surname			
Inventor's Signature				Date			
Residence: City		State		Country		Citizenship	
Post Office Address							
Post Office Address							
City		State		ZIP		Country	

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AUG 3 2006

EXPRESS MAIL LABEL
NO.: EL386266227US



Patent Docket No. U012452-9

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Chanshen XU, et al.

Serial No.: 09/445,139

Filed: December 2, 1999

For: METHOD AND APPARATUS FOR WATERMARKING WAVETABLE SYNTHESIS
ARCHITECTURES

Group No.:

Examiner:

Assistant Commissioner for Patents
Washington, D.C. 20231

REQUEST FOR CORRECTED FILING RECEIPT

1. Attached is a copy of the official filing receipt received from the PTO in the above application for which issuance of a corrected filing receipt is respectfully requested.
2. There is an error with respect to the following data, which is:

[X] incorrectly entered

and/or

[] omitted.

CERTIFICATE OF MAILING/TRANSMISSION (37 C.F.R. 1.8a)

I hereby certify that this correspondence is, on the date shown below, being:

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- ☒ deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

FACSIMILE

- ☐ transmitted by facsimile to the Patent and Trademark Office.

Date: November 22, 2000

Signature

Julian H. Cohen
(type or print name of person certifying)

AUG 3 2006

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- | | <i>Error in</i> |
|--------|-----------------------------|
| 1. [] | Applicant's name |
| 2. [] | Applicant's address |
| 3. [] | Title |
| 4. [] | Filing Date |
| 5. [] | Serial Number |
| 6. [x] | Foreign/PCT Application Re: |
| 7. [] | Other |

- | | <i>Correct data</i> |
|----|--|
| 1. | |
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SIGNATURE OF PRACTITIONER

Julian H. Cohen

(type or print name of practitioner)

P.O. Address

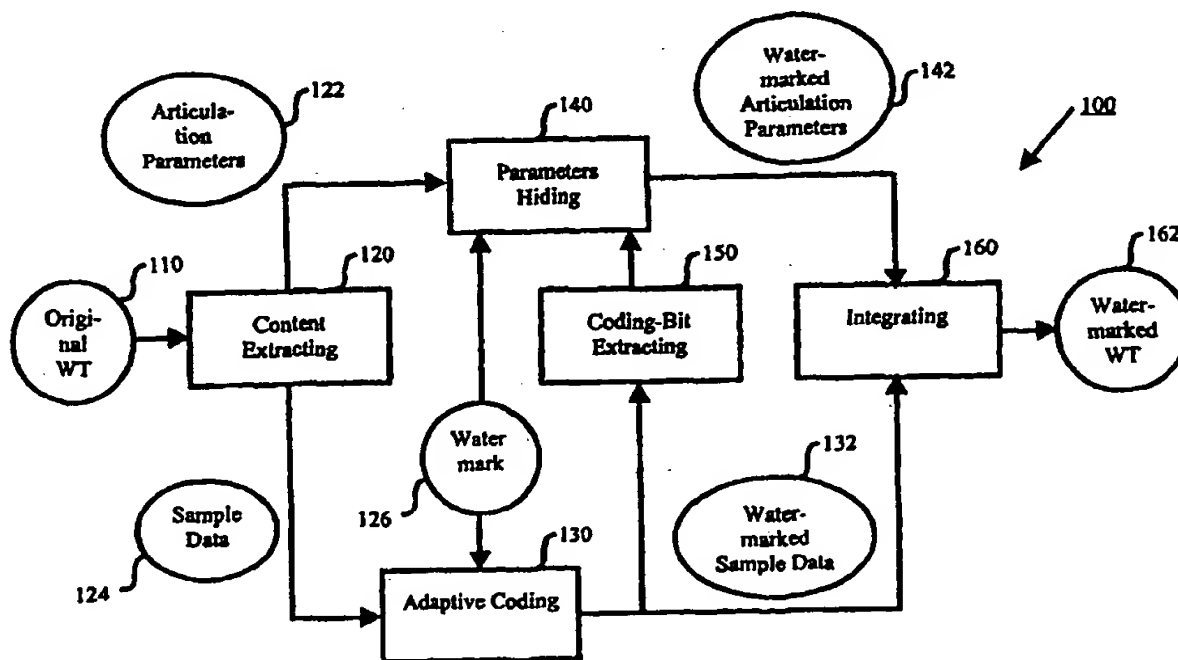
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New York, N.Y. 10023



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : H04L 9/00, G10L 13/02, G10H 7/02	A1	(11) International Publication Number: WO 00/45545 (43) International Publication Date: 3 August 2000 (03.08.00)
(21) International Application Number: PCT/SG99/00004 (22) International Filing Date: 28 January 1999 (28.01.99) (71) Applicant (for all designated States except US): KENT RIDGE DIGITAL LABS [SG/SG]; 21 Heng Mui Keng Terrace, Singapore 119613 (SG). (72) Inventors; and (75) Inventors/Applicants (for US only): XU, Changsheng [CN/SG]; Blk 701, West Coast Road #06-337, Singapore 120701 (SG). WU, Jiankang [CN/SG]; Blk 51, Teban Gardens Road, #06-565, Singapore 600051 (SG). SUN, Qibin [CN/SG]; Blk 407, Clementi Avenue 1 #11-54, Singapore 120407 (SG). (74) Agent: SPRUSON & FERGUSON PTE LTD.; 51 Bras Basah Road #02-03, Plaza by the Park, Singapore 189554 (SG).		(81) Designated States: GB, SG, US. Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: METHOD AND APPARATUS FOR WATERMARKING WAVETABLE SYNTHESIS ARCHITECTURES



(57) Abstract

A method, an apparatus, and a computer program product for digital audio watermarking of wavetable (WT) format audio, including downloadable sounds (DLS) (110), are disclosed. Correspondingly, a method, an apparatus, and a computer program product for extracting watermarks (126, 552) from a digital audio watermarked WT audio (162, 510) are disclosed. In particular, a digital audio watermark (126) is embedded (140, 130) in both articulation parameters (122) and sample data (124) of a DLS (110). A finite automation module (220) is used to implement adaptive coding (130) of the sample data (124). Virtual parameters (430) are generated for information hiding (140) applied to the articulation parameters (122). Optionally, playback of the WT (152) can be limited by an embedded control signal. Brief overviews of MIDI and DLS are provided.